Westinghouse
Electric Corporation

1180 Andover Park West
Box 3938
Seattle Washington 98124

July 11, 1977

Mr. Pete Henault, Manager
Office of Environmental Affairs
Seattle City Light
1015 Third Ave.
Seattle, Washington 98104

Dear Mr. Henault:

I am replying to your June 2, 1977 letter, in which you asked for additional data regarding our non-PCB dielectric, WEMCOL.

I referred your letter to our Bloomington Works, and have received a reply from Mr. George E. Mercier, Manager, Capacitor Unit Engineering. His comments follow:

"Each of the six questions raised by Mr. Henault is answered on pages 2 and 3 of the attached paper "Wemcol Capacitor Fluid Development" to be presented at the E/E Insulation Conference in Chicago in September. This answers the questions on fish toxicity, chronic feed studies, Ames mutagenicity tests, lipid (fat) soluability, river and soil die-away tests, and bioaccumulation tests. The Wemcol fluid has outstanding environmental and occupational compatability properties.

1. Fish toxicity tests were made by Monsanto using MCS 1238 fluid which is a mixture of 80% Wemcol (isopropylbiphenyl) and 20% xylyl tolyl sulfone. See attached Monsanto letter of January 27, 1976 and accompanying data from Industrial Bio-Test Laboratories, Inc. and Younger Laboratories Inc.

2. Chronic feeding studies on rats are described in the above report and also in the attached paper "Chlorinated Biphenyl Dielectrics - Their Utility and Potential Substitutes" by David Wood presented at the National Conference on Polychlorinated Biphenyls, Nov. 19 - 21, 1975.

3. Ames mutagenicity tests were made by Westinghouse Electric Research Biology Technical Service and the negative results are summarized in the attached letter of November 3, 1976 from A. Zervins. The Ames test was also made by Litton Bionetics, Inc. for Sun Oil Company. The negative results are explained in the July 12, 1976 letter from Brian C. Davis of Suntech, Inc. and the attached report "Mutagenicity Evaluation of Sun X-489-17 Experimental Fluid Final Report". The Sun X-489-17 fluid is isopropylbiphenyl (Wemcol).

4. Lipid soluability of Wemcol is extremely low which is reported in the David Wood paper in 2 above on pages 12, 13 and 14.

5. Biodegradation tests were made by several laboratories using several test methods including river and soil die-away, sewage sludge treatment, and biological oxygen demand tests. See reference in 1 above, page 5. Also, see reference in 2 above, pages 11 and 12, and Appendix B. Also, see attached "Sunoco X-489-17 Experimental Capacitor Fluid Information Sheet", page 2, and Tanatex letter of August 16, 1976. See also letter of June 10, 1977 from Mitsui and Co., Ltd.

6. Bioaccumulation tests are described in reference in 1 above, page 9 and in reference in 2 above, pages 12, 13 and 14 and in Appendix A.

We understand your concern for environmental effects of any new chemical that you are considering just as we have been concerned that a replacement fluid for PCB should have outstanding environmental properties. When candidate fluids were being evaluated, the highest priority requirement was for a fluid with excellent and unquestioned environmental properties. We firmly believe that isopropylbiphenyl clearly meets this objective and is superior in this respect to any other capacitor fluids being offered. Incidentally, other interested parties, such as Weyerhaeuser, are in agreement with us on this point."

We hope that this information is sufficient for your analysis of the environmental capability of our new Wemcol fluid.

Yours very truly,

A. W. Kessler
Sales Engineer

AWK/jm